

### **Abstract**

A charge diffusion crosstalk reduction process is provided for image signals from, for example, a CMOS image sensor. Charge diffusion crosstalk processing can be used in accordance with aspects of the present invention to reduce charge diffusion crosstalk caused by electrons migrating from adjacent pixels. Crosstalk effects can be determined by color gain and color offset. By adjusting the color gain and color offset, crosstalk can be cancelled to the first order. Charge diffusion crosstalk processing in accordance with aspects of the present invention can be relatively easily integrated with color correction processing during the post processing of image sensors. Color correction and cross talk cancellation processing can use the same circuitry as previously used before by color correction process only. The input coefficients for color correction and cross talk cancellation processing can be determined from the results of the multiplication of color correction matrix  $\underline{\underline{C}}$  and crosstalk cancellation matrix  $\underline{\underline{K}}^{-1}$ .